Automotive Body and Related Repairers

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Significant Points

- Both formal and on-the-job training are suggested if a worker wants to become a fully skilled automotive body repairer, because advances in technology have greatly changed the structure, components, and materials used in automobiles.
- Repairers need good reading ability and basic mathematics and computer skills in order to follow instructions and diagrams in print and computer-based technical manuals.

Nature of the Work

Thousands of motor vehicles are damaged in traffic accidents every day. Although some of these vehicles are beyond repair, others can be made to look and drive like new. Automotive body repairers straighten bent bodies, remove dents, and replace crumpled parts that cannot be fixed. They repair all types of vehicles, but work mostly on cars and small trucks, although some work on large trucks, buses, or tractor-trailers.

Automotive body repairers use special equipment to restore damaged metal frames and body sections. Repairers chain or clamp frames and sections to alignment machines that use hydraulic pressure to align damaged components. "Unibody" vehicles—designs built without frames—must be restored to precise factory specifications for the vehicle to operate correctly. To do so, repairers use benchmark systems to make accurate measurements of how much each section is out of alignment and hydraulic machinery to return the vehicle to its original shape.

Body repairers remove badly damaged sections of body panels with a pneumatic metal-cutting gun or by other means and weld in replacement sections. Repairers pull out less serious dents with a hydraulic jack or hand prying bar or knock them out with handtools or pneumatic hammers. They smooth out small dents and creases in the metal by holding a small anvil against one side of the damaged area while hammering the opposite side. Repairers also remove very small pits and dimples with pick hammers and punches in a process called metal finishing.

Body repairers also repair or replace the plastic body parts that are increasingly being used on new-model vehicles. They remove damaged panels and identify the type and properties of the plastic used on the vehicle. With most types of plastic, repairers can apply heat from a hot-air welding gun or by immersion in hot water and press the softened panel back into its original shape by hand. They replace plastic parts that are badly damaged or very difficult to repair.

Body repairers use plastic or solder to fill small dents that cannot be worked out of the plastic or metal panel. On metal panels, they file or grind the hardened filler to the original shape and clean the surface with a media blaster before painting. In many shops, automotive painters do the painting. (These workers are discussed in the *Handbook* statement on painting and coating workers, except construction and maintenance.) In small shops, workers often do both body repairing and painting. A few body repairers specialize in repairing fiberglass car bodies.

The advent of assembly-line repairs in large shops enables the establishment to move away from the one-vehicle, one-repairer method to a team approach and allows body repairers to specialize in one type of repair, such as straightening frames or repairing doors and fenders. Some body repairers specialize in installing and repairing glass in automobiles and other vehicles. *Automotive glass installers and repairers* remove broken, cracked, or pitted windshields and window glass. Glass installers apply a moisture-proofing compound along the edges of the glass, place the glass in the vehicle, and install rubber strips around the sides of the windshield or window to make it secure and weatherproof.

Body repair work has variety and challenges: each damaged vehicle presents a different problem. Using their broad knowledge of automotive construction and repair techniques, repairers must develop appropriate methods for each job. They usually work alone, with only general directions from supervisors. In some shops, helpers or apprentices assist experienced repairers.

Working Conditions

Most automotive body repairers work a standard 40-hour week, although some, including the self-employed, work more than 40 hours a week. Repairers work indoors in body shops that are noisy with the clatters of hammers against metal and the whine of power tools. Most shops are well ventilated, in order to disperse dust and paint fumes. Body repairers often work in awkward or cramped positions, and much of their work is strenuous and dirty. Hazards include cuts from sharp metal edges, burns from torches and heated metal, injuries from power tools, and fumes from paint. However, serious accidents usually are avoided when the shop is kept clean and orderly and when safety practices are observed.

Employment

Automotive body and related repairers held about 220,000 jobs in 2002; about 1 in 10 specialized in automotive glass installation and repair. Most repairers worked for automotive repair and maintenance shops or automobile dealers. Others worked for organizations that maintain their own motor vehicles, such as trucking companies. A small number worked for wholesalers of motor vehicles, parts, and supplies. More than 1automotive body repairer in 10 was self-employed, almost twice the proportion for all installation, maintenance, and repair occupations.

Training, Other Qualifications, and Advancement

Most employers prefer to hire persons who have completed formal training programs in automotive body repair, but these programs supply only a portion of employers' needs. Therefore, most new

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repairers receive primarily on-the-job training, supplemented, when available, with short-term training sessions given by vehicle, parts, and equipment manufacturers. Some degree of training is necessary because advances in technology have greatly changed the structure, components, and materials used in automobiles. As a result, proficiency in new repair techniques is necessary. For example, bodies of many newer automobiles are a combination of materials—traditional steel, aluminum, and a growing variety of metal alloys and plastics. Each of these materials or composites requires the use of somewhat different techniques to reshape parts and smooth out dents and small pits. Many high schools, vocational schools, private trade schools, and community colleges offer automotive body repair training as part of their automotive service programs.

A fully skilled automotive body repairer must have good reading ability and basic mathematics and computer skills. Restoring unibody automobiles to their original form requires body repairers to follow instructions and diagrams in technical manuals in order to make precise three-dimensional measurements of the position of one body section relative to another.

A new repairer begins by assisting experienced body repairers in tasks such as removing damaged parts, sanding body panels, and installing repaired parts. Novices learn to remove small dents and to make other minor repairs. They then progress to more difficult tasks, such as straightening body parts and returning them to their correct alignment. Generally, to become skilled in all aspects of body repair requires 3 to 4 years of on-the-job training.

Certification by the National Institute for Automotive Service Excellence (ASE), although voluntary, is the recognized standard of achievement for automotive body repairers. ASE offers a series of four exams for collision repair professionals twice a year. Repairers may take from one to four ASE Master Collision Repair and Refinish Exams. Repairers who pass at least one exam and have 2 years of hands-on work experience earn ASE certification. The completion of a postsecondary program in automotive body repair may be substituted for 1 year of work experience. Those who pass all four exams become ASE Master Collision Repair and Refinish Technicians. Automotive body repairers must retake the examination at least every 5 years to retain their certification.

Continuing education is required throughout a career in automotive body repair. Automotive parts, body materials, and electronics continue to change and to become more complex and technologically advanced. To keep up with the technological advances, repairers must continue to gain new skills, read technical manuals, and attend seminars and classes.

As beginners increase their skills, learn new techniques, and complete work more rapidly, their pay increases. An experienced automotive body repairer with supervisory ability may advance to shop supervisor. Some workers open their own body repair shops. Others become automobile damage appraisers for insurance companies.

Job Outlook

Employment of automotive body repairers is expected to increase about as fast as the average for all occupations through the year 2012. The need to replace experienced repairers who transfer to other occupations or who retire or stop working for other reasons will account for the majority of job openings. Opportunities should be best for persons with formal training in automotive body repair and mechanics.

Demand for qualified body repairers will increase as the number of motor vehicles in operation continues to grow in line with the Nation's population. With each rise in the number of motor vehicles in use, the number of vehicles damaged in accidents also will grow. New automobile designs increasingly have body parts made of steel alloys, aluminum, and plastics—materials that are more difficult to work with than are traditional steel body parts. In addition, new automotive designs of lighter weight are prone to greater collision damage than are older, heavier designs and, consequently, more time is consumed in repair.

However, increasing demand due to growth in the number of vehicles in operation will be somewhat tempered by improvements in the quality of vehicles and technological innovations that enhance safety and reduce the likelihood of accidents. Employment growth also will be limited by changes in body shop management that will increase productivity, reduce overhead expenses, and improve standardization. Larger shops will employ a team approach to repairs to decrease repair time and expand their volume of work. Insurers are increasingly looking to shop networks for repair services. In addition, demand for repair services will grow slowly as more vehicles are declared a total loss after accidents. In many such cases, the vehicles are not repaired because of the high cost of fixing the extensive damage that results when airbags deploy and of replacing the increasingly complex parts and electronic components of new vehicles.

Employment growth will continue to be concentrated in automotive repair and maintenance shops and automobile dealers. The automotive repair business is not very sensitive to changes in economic conditions, and experienced body repairers are rarely laid off. However, although major body damage must be repaired if a vehicle is to be restored to safe operating condition, repair of minor dents and crumpled fenders often can be deferred during an economic slowdown. In times of economic contractions, most employers will hire few new workers, some unprofitable body shops may go out of business, and some dealers might consolidate body shops.

Earnings

Median hourly earnings of automotive body and related repairers, including incentive pay, were $15.71 in 2002. The middle 50 percent earned between $11.64 and $20.94 an hour. The lowest 10 percent earned less than $8.70, and the highest 10 percent earned more than $27.10 an hour. In 2002, median hourly earnings of automotive body and related repairers were $16.96 in automobile dealers and $15.45 in automotive repair and maintenance.

Median hourly earnings of automotive glass installers and repairers, including incentive pay, were $12.93 in 2002. The middle 50 percent earned between $9.90 and $16.58 an hour. The lowest 10 percent earned less than $7.91, and the highest 10 percent earned more than $20.24 an hour. Median hourly earnings in 2002 in automotive repair and maintenance shops, the industry employing the largest number of automotive glass installers and repairers, were $12.86.

The majority of body repairers employed by automotive dealers and repair shops are paid on an incentive basis. Under this method, body repairers are paid a predetermined amount for various tasks, and earnings depend on the amount of work assigned to the repairer and how fast it is completed. Employers frequently guarantee workers a minimum weekly salary. Body repairers who work for trucking companies, buslines, and other organizations that maintain their own vehicles usually receive an hourly wage.

Helpers and trainees typically earn from 30 percent to 60 percent of the earnings of skilled workers. Helpers and trainees usually receive an hourly rate, until they are skilled enough to be paid on an incentive basis.

Related Occupations

Repairing damaged motor vehicles often involves working on mechanical components, as well as vehicle bodies. Automotive body repairers often work closely with individuals in several related occupations, including automotive service technicians and mechanics, diesel service technicians and mechanics, auto damage insurance appraisers, and painting and coating workers, except construction and maintenance.

Sources of Additional Information

Additional details about work opportunities may be obtained from automotive body repair shops, automobile dealers, locals of the unions previously mentioned, or local offices of your State employment service. State employment services also are a source of information about training programs.

For general information about automotive body repairer careers, write to any of the following sources:

➤ Automotive Service Association, P.O. Box 929, Bedford, Texas 76095-0929. Internet: **http://www.asashop.org**

➤ National Automobile Dealers Association, 8400 Westpark Dr., McLean, VA 22102. Internet: **http://www.nada.org**

➤ Inter-Industry Conference On Auto Collision Repair Education Foundation (I-CAR), 3701 Algonquin Rd., Suite 400, Rolling Meadow, IL 60008. Telephone (tollfree): 800-422-7872.

For information on how to become a certified automotive body repairer, write to:

➤ National Institute for Automotive Service Excellence (ASE), 101 Blue Seal Dr. SE., Suite 101, Leesburg, VA 20175. Internet: **http://www.asecert.org**

For a directory of certified automotive body repairer programs, contact:

➤ National Automotive Technician Education Foundation, 101 Blue Seal Dr., SE., Suite 101, Leesburg, VA 20175. Internet: **http://www.natef.org**

For a directory of accredited private trade and technical schools that offer training programs in automotive body repair, contact:

➤ Accrediting Commission of Career Schools and Colleges of Technology, 2101 Wilson Blvd., Suite 302, Arlington, VA 22201. Internet: **http://www.accsct.org**

For a list of public automotive body repair training programs, contact:

➤ SkillsUSA-VICA, P.O. Box 3000, Leesburg, VA 20177-0300. Internet: **http://www.skillsusa.org**